Idem cum nova quaedam de Hibernia consilia sibi periculosa esse viderentur, maluit a duce suo, maluit etiam ab amico suo, discedere quam insulas nostras in uno coniunctas, quod ad sese attineret, sinere divelli. Ipse inter senatores suffragiis electos partium suarum ductor constitutus, socios suos quam fortiter ducit, adversarios quam acriter oppugnat! Etenim, quamquam in rerum natura eos potissimum flores diligere dicitur, qui solis a radiis remoti in horto secluso ab aperto caelo delicate defenduntur, ipse vitae publicae solem atque pulverem numquam reformidat, quolibet sub caelo ad dimicationem semper promptus, semper paratus."

But we cannot indulge in quotations which would reach to infinity. In nearly six hundred specimens of the art of Dr. Sandys there is hardly one from which could not be quoted some felicitous phrase or allusion. The letters written in the name of Cambridge are as happy. Among these, specially interesting are the letter to the American Cambridge and that to Lord Morley. The volume is one to which the scholarly reader will recur again and again with interest and admiration. R. Y. TYRRELL.

PSYCHICAL RESEARCH.

Spirit and Matter before the Bar of Modern Science. By Dr. Isaac W. Heysinger. Pp. xxviii+433. (London: T. Werner Laurie, 1910.) Price 15*s.* net.

THE venue of Dr. Heysinger's elaborate though very readable work is the debatable land where three rival powers meet—religion, philosophy, and science. He shows very clearly that these three explainers are to some extent merging; the sharp distinctions are vanishing. Religion is freeing itself from rigid metaphysical dogmas, philosophy is becoming more concrete, and science is becoming more philosophical—is recognising that it cannot provide ultimate explanations of anything. The hope of the future is in a spiritual interpretation of the universe. This interpretation is being forced upon us as the only possible one by the recent advances in psychology and psychical research.

In dealing with spiritualism and occult phenomena generally, Dr. Heysinger takes up a sane and scientific position. He demolishes Hume's argument of "impossibility," quoting Huxley in support of the view that nothing can safely be called impossible outside mathematics and formal logic. As to miracles, either ancient or modern, the really scientific man will say:—"It is a question of evidence; I will make no *a priori* decision, either for or against." The evidence brought forward during the last twenty-five years, by such men as Sir Oliver Lodge, Sir William Crookes, Prof. James, Dr. A. R. Wallace, F. W. H. Myers, and other careful investigators, seems sufficient to establish at least a *prima facie* case. Nevertheless, as the author is careful to point out, it must not be rashly conceded that all psychic phenomena are due to the agency of disembodied spirits; many of these phenomena are probably the work of the subliminal consciousness of some living person, or even of some impersonal world-soul, as many philosophers have thought; but, in many cases, the evidence seems to be sufficient to justify at least a provisional hypothesis that the minds of discarnate people are somehow still producing effects in our material world, by some such process, perhaps, as telepathy. The phenomena are various in kind, from planchette-writing to "apparitions"; but they point in the same direction—to survival of human personality past the wrench of bodily death, and consequently to a spiritual interpretation of experience.

The present reviewer is a member of the Society for Psychical Research (though belonging to its "sceptical wing"), and has devoted much time and thought to the subject for many years. He is dubious about "materialisations," and has lurid opinions about "slate writing by spirits" (or, rather, about the mediums who produce it), but personal experience has convinced him that things do happen, sometimes, which seem inexplicable by orthodox hypotheses. The thing to do is to maintain a rigorously scientific attitude, to observe the phenomena with all possible keenness and precaution against fraud or illusion, and to beware of drawing hasty inferences. Darwin collected facts for many years before he "permitted himself to speculate" concerning explanations. It is perhaps too much to expect that such caution should be shown by psychical researchers, for the subject is more intimately connected with our deepest interests; but it is nevertheless desirable. On the other hand, it can truthfully be said that there is more foolishness shown by the ignorant disbeliever who has never investigated than by the man who has learnt a little and is apt to believe too much.

Dr. Heysinger's book may be warmly recommended. Not the least of its good features is its tremendous armoury of quotations—showing very wide reading—from all the leading investigators. J. A. H.

PSEUDOCYTOLOGY.

The Plant Cell, its Modifications and Vital Processes. A Manual for Students. By H. A. Haig. Pp. xxx+799. (London: C. Griffin and Co., Ltd., 1910.) Price 6*s.* net.

WRITERS of elementary text-books might be expected to take some trouble to ensure that their statements are, at any rate as far as possible, accurate and clear. It is a matter of common experience that failures in both respects are not uncommon, and the author of the book before us has compiled a volume which may have some merits, but they are hardly those which the ordinary student will appreciate.

To start with, we may remark that some of the illustrations and photographs are decidedly good, but that the text strikes us as useful chiefly as an exercise in criticism for more advanced students. What are we to make, for instance, of such statements as the following:—"The various forms of 'pits' occurring in the walls (of tracheids) may possibly be of use in sap conduction, but, as a matter of fact, these pits function more as a means of exit for the protoplasm after it has finished its work in the Xylem elements." The confusion (on p. 115) between normal and homotypic nuclear division is absurd. *Germination* of pollen, &c., is wrongly and very misleadingly described as *maturation*.

The development of the angiospermic embryo seems to be confused with that of the fern, and the development of the archegonium (called by the author the oogonium), so far as it is intelligible, is quite incorrect. By the way, the chemiotactic substance emitted from the archegonium is said to be "malic acid or an enzyme."

Few botanists will agree with the view that the homosporous fern-prothallium can be properly, or otherwise than misleadingly, regarded in the light of a "fusion of two prothallia produced by the germination of a potentially double (male and female) spore."

Turning to the part of the book dealing with physiological topics, we find the statement that "Much of the reserve starch in the tuber is formed at first in plastids, and by the time the tuber is full grown, all the plastids have been converted into starch," and, *in a footnote,* we are further gravely informed that "some of the starch is, however, formed in the tuber by the translocation of carbohydrate from the cells of remote parts." It would have been of interest to know what proportions of the starch do and do not respectively owe their origin to this process.

The above citations, which could easily have been added to, may suffice to exhibit the side of the book which a teacher would find defective or effective according to the use he made of it with his students.

But it may be said that it is not fair to judge a book on the "plant cell" by the same canons that would apply to a work more ostensibly on botany, structural, morphological, and physiological. But, as a matter of fact, the volume is really compiled on these lines, and if it were to be criticised from a cytological standpoint the verdict would be far more disadvantageous. It is a pity that the author has not more fully and carefully surveyed his proposed field of work before writing a book. He has evidently aimed at clearness, and, with more knowledge and care, may still produce a useful contribution.

BIOLOGY AND HUMAN LIFE.

Science from an Easy Chair. By Sir Ray Lankester, K.C.B., F.R.S. Pp. xiii+423. (London: Methuen and Co., Ltd., 1910.) Price 6*s.*

IN this volume of forty-three collected papers, the popularisation of science surely reaches high-water mark. To be vividly interesting without offending against accuracy, to season an abundance of solid fact with ideas so that the result is an intellectual feast, to illustrate scientific method by stratagem so subtle that the reader does not know he is being educated—that is what Sir Ray Lankester has achieved. He calls it "Science from an Easy Chair," and so be it; but we hope the delighted reader will realise that it is science from a rich experience of lifelong observation and research. Since Huxley, no one has had a deeper influence on British zoology than the author, and even these parerga show the hand of a master.

Some of the papers are good tracts for the times. The first one, entitled "Science and Practice," with the hygienic triumphs at Panama for its text, illustrates what science can do, if it be allowed, for "the establishing of the kingdom of man." The pages headed "Darwin's Theory Unshaken" should be of use to those who mislead the public by declaring that Darwinism is dead. Other papers show, very briefly, of course, what a living Darwinism has to say about the re-stocking of our villages, the feeble-minded, and various disquieting features of our British birth-rate and death-rate. Apart from such serious questions, it is interesting to notice how many of the papers have a practical point—the poison-vine in England; oysters; the heart's beat; sleep; cholera; sea breezes, mountain air and ozone; oxygen gas for athletes and others; hop blight; phylloxera; clothes moths; and more besides. This is symptomatic of our times, but it is also what we expect from the author of "The Kingdom of Man," that masterly exposition of the sound doctrine that science is for life—*savoir, prévoir, pourvoir!*

Another set of papers deals with subjects in regard to which much progress has been recently made. Among these we find the extraordinary story of the common eel, illustrated by a beautiful coloured drawing which shows the contrast between the mature "silver" eel and the immature "yellow" eel. Another of this type is the account of the human skull from the Chapelle-aux-Saints, in the Corrèze, of the Heidelberg lower jaw, and other recent additions to the data from which the pedigree of man is being patiently worked out. We may also notice the interesting account of the new fresh-water medusoids. A third set—not that we are attempting to classify the forty-three—includes a number of delightful natural-history sketches, such as one on gossamer (where, by the way, it seems to be suggested that the somewhat mysterious parachute-making habit is confined to autumn), or another on honey-dew, or another on the jumping-bean. It seems to be a rotatory easy-chair from which this pleasant science comes, for the author takes the whole world for his province, from microbes to comets, from the land of azure blue to "the starres that wonne on highe," not forgetting either to write of dragons. Quite by itself, with a delightful *note personnel,* is the account of Metchnikoff's day with Tolstoi last year. We hope for many more volumes of the "Easy Chair Series." J. A. T.

ALPINE FLOWERS.

(1) *Alpine Flowers and Gardens, Painted and Described.* By G. Flemwell. Pp. xiv+167. (London: A. and C. Black, 1910.) Price 7*s.* 6*d.* net.

(2) *Summer Flowers of the High Alps.* By Somerville Hastings. Pp. xxvi+85. With an index and 39 colour plates from direct colour photographs by the author. (London: J. M. Dent and Sons, Ltd.; New York: E. P. Dutton and Co., n.d.) Price 7*s.* 6*d.* net.

(1) A SERIES of twenty well-executed colour prints appears to be the *raison d'être* of this volume on alpine flowers and gardens. The author, who is also the artist, knows his Alps and alpine flowers well, and has contrived to write an interesting and instructive account of the alpine flora in its various aspects. He